Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1804FDE174FD	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FR2003/003267	International filing date (*day/month/year*) 03 novembre 2003 (03.11.2003)	Priority date (*day/month/year*) 03 November 2003 (03.11.2003)
International Patent Classification (IPC) or national classification and IPC H04B 10/10		
Applicant FRANCE TELECOM		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
24 juin 2005 (24.06.2005)	10 August 2005 (10.08.2005)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/FR2003/003267

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☒ the description:

pages 1-12, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☒ the claims:

pages 1-14, as originally filed

pages _____, as amended (together with any statement under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

☒ the drawings:

pages 1/4-4/4, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/FR 03/03267

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	4-6, 8-10	YES
	Claims	1-3, 7, 11-14	NO
Inventive step (IS)	Claims		YES
	Claims	1-14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO

2. Citations and explanations

1. This report makes reference to the following documents:

D1: EP-A-1 054 520 (LUCENT TECHNOLOGIES INC), 22 November 2000

D2: EP-A-0 629 881 (XEROX CORP), 21 December 1994

D3: WO 02/17516 A (LASERMAX INC; HOUDE WALTER WILLIAM R (US)), 28 February 2002

D4: PATENT ABSTRACTS OF JAPAN, Vol. 1998, No. 11, 30 September 1998 (1998-09-30) & JP 10 154825 A (SHARP CORP), 9 June 1998

2. The present application does not meet the requirements of PCT Article 33(1) because independent claims 1 and 11 do not meet the requirement of PCT Article 33(2) for novelty.

2.1 Document D1 describes (the references in parentheses are to that document):

"a hub (figure 1: "central hub 300") for wirelessly connecting (paragraph [0018]: "Free space optical system") terminals (figure 1: "Term") to a communications network (column 8, lines 12-15), the

hub being provided with transmitting/receiving means for exchanging information with a remote terminal (figure 1: "Term" of "Subscriber 21" and paragraph [0018]) which is also provided with transmitting/receiving means (paragraph [0018]: "upstream and downstream direction"), the hub being characterised in that its transmitting/receiving means comprise a transmitter with an extended infra-red light source (paragraph [0018]: "Two different wavelengths of infra-red light are used") (paragraph [0018]: "Each hub has a radius of about 2mi." and figure 2a: "downstream beam").

Consequently, the subject matter of claim 1 is not novel.

2.2 Document D1 also describes (the references in parentheses are to that document):

"a wireless communication process (paragraph [0018]: "Free space optical system") over a connection hub (figure 1: "Central hub 300") between a communications network (column 8, lines 12-15) and a remote terminal (figure 1: "Term"), said hub being provided with transmitting/receiving means (figure 1a: "photodiode 220" and "laser 212") and characterised in that the hub transmitting/receiving means transmit information to the terminal by means of a transmitter comprising an extended infra-red light source (paragraph [0018]: "Two different wavelengths of infra-red light are used") (paragraph [0018]: "Each hub has a radius of about 2mi." and figure 2a: "downstream beam").

Consequently, the subject matter of claim 11 is not

novel.

3. The applicant should also note that document D2 likewise describes the subject matter of claims 1 and 11 (see the passages cited in the search report).

4. Moreover, the subject matter of claims 2, 3, 7, 12, 13 and 14 does not meet the requirement of PCT Article 33(2) for novelty.

4.1 Claim 2: the hub transmitter described in document D1 can transmit information to a remote terminal at high speed (column 5, lines 3-6).

4.2 Claim 3 the hub described in document D1 include a follow-up control of the source which makes it possible to achieve optimum alignment between the source and the transmitting/receiving means of a terminal located in the coverage zone (column 7, lines 47-50).

4.3 Claim 7: the transmitting/receiving means of the hub described in document D2 include an omnidirectional receiver.

4.4 Claims 12 and 13: claims 12 and 13 do not add any feature which would further restrict the subject matter for which protection is sought in the claims to which they refer.

4.5 Claim 14: in an embodiment of the system described in D1, information is transmitted between the terminal and the hub in a burst mode (column 5, line 12: "using IP protocol").

5. In addition, dependent claims 4-6 and 8-10 do not contain any feature which, in combination with the features of any claim to which they refer, defines a subject matter which would meet the PCT inventive step requirements.

5.1 Claims 4-6: the use of scattering (including holographic) transmission means and of scattering reflection means in a wireless optical communication system is known to a person skilled in the art (see the abstract and figures 1, 2 and 4 of document D3).

5.2 Claims 8-10: the use of a hemispheric omnidirectional concentrator in an omnidirectional receiver for wireless optical communications is known to a person skilled in the art (see the abstract and figure 1 of document D4).

The application of an anti-reflection surface coating to an optical filter concentrator is normal trade practice for a person skilled in the art.